



When to consider strong opioids for patients with acute pain

KEY MESSAGES:

- There are very few situations when a strong opioid should be initiated in primary care for the management of acute pain
- Morphine, if tolerated, is the first-line treatment for patients with severe acute pain
- Oxycodone is a second-line opioid for patients who cannot tolerate morphine
- The concurrent use of paracetamol or a NSAID reduces the dose of opioid required
- Create an analgesic plan whenever a strong opioid is prescribed for acute pain to set the expectation that treatment will be short term

Strong opioids, such as morphine and oxycodone, are indicated at Step 3 of the analgesic ladder (see: “The principles of managing acute pain in primary care”). There are relatively few situations when a strong opioid should be initiated in primary care for acute pain, other than the immediate management of trauma or other severe pain while awaiting transportation to hospital. Morphine is sometimes prescribed as a second-line option for patients being managed at home with biliary or renal colic who do not tolerate NSAIDs. A more common scenario for prescribing strong opioids in primary care is renewing prescriptions for patients who have been discharged from hospital.

To ensure the use of a strong opioid is appropriate in primary care, consider the following questions before prescribing:

- Can the patient be treated in primary care or do they need to be referred to secondary care?
- Is the underlying cause likely to be causing pain severe enough to require a strong opioid?
- Can the patient be managed at Step 2 of the ladder, e.g. with codeine or tramadol and paracetamol?
- Is there any suspicion that the patient is seeking a strong opioid for misuse or diversion?

The appropriate use of multi-modal analgesia at Step 2 of the analgesic ladder can be as effective as regimens containing strong opioids. A randomised controlled trial found that in 240 patients discharged from an Emergency Department with acute pain in their arms, shoulders, hips or legs, oxycodone and paracetamol (5 mg and 325 mg every four hours as needed) did not produce significantly greater analgesia than codeine and paracetamol (30 mg and 300 mg every four hours as needed) and both groups of patients were similarly satisfied with the analgesics that they were prescribed.¹


Morphine is the first-line choice of strong opioid

In New Zealand the following strong opioids are fully-subsidised for the treatment of patients with moderate to severe acute* pain:¹

- Morphine
- Oxycodone
- Fentanyl
- Pethidine

* There are no funding restrictions on the use of methadone to treat pain, but it is not indicated for the treatment of acute pain as it takes up to one week to reach steady state and is difficult to titrate


Morphine is the first-line treatment when a strong opioid is indicated for a patient with acute pain. Morphine may cause nausea and vomiting, especially when first initiated, which some patients may be unable to tolerate. Morphine needs to be used with caution in patients with renal impairment and dose and dosing intervals may need to be adjusted. In patients with CKD, it is recommended to start at one-quarter to one-half of the usual starting dose of morphine.² Accumulation of metabolites may result in delayed respiratory depression.²

 An expert recommendation is to halve the morphine starting dose if eGFR is < 45 mL/min/1.75m² and to avoid morphine if eGFR is <30 mL/min/1.75m².

Oxycodone is a second-line option for patients unable to tolerate the adverse effects of morphine, although it may also cause nausea and vomiting. Oxycodone also needs to be used with caution in patients with renal impairment. The serum concentration of oxycodone increases by 50% in patients with eGFR < 60 mL/min/1.75m².² In patients with CKD, it is recommended to start at one-third of the usual starting dose.²

Oxycodone continues to be prescribed at relatively high rates, compared to morphine, despite being no more effective than morphine and associated with the same adverse effects and cautions. Research suggests that oral oxycodone is also more likely to be misused than oral morphine.³ In many

situations where oxycodone is prescribed, it is likely that morphine or a weaker opioid, in combination with paracetamol would be a more appropriate option.

 Further information on oxycodone prescribing is available from: "Oxycodone: how did we get here and how do we fix it?" <https://bpac.org.nz/bpj/2014/july/oxycodone.aspx>

Fentanyl is generally preferred over morphine or oxycodone for patients with renal dysfunction, as its metabolism does not produce clinically active metabolites that can accumulate in patients with kidney disease. However, fentanyl is only subsidised in transdermal patches or injections, which are not suitable for patients with acute pain being managed at home.

Pethidine is now rarely used as it is no more effective than morphine, and is associated with an increased risk of adverse effects, such as vomiting and seizures.^{4,5}

Strategies for minimising opioid use

Tolerance will often occur after as little as ten days of treatment with a strong opioid, meaning that the patient will require an increasingly higher dose to gain the same level of pain relief. International data suggests that up to 15% of patients may become dependent on opioids following surgery.⁶

Whenever a patient presents for a prescription renewal for an opioid, consider whether ongoing treatment is appropriate. The need for strong opioids following surgery will vary depending on the procedure and the recovery time prior to discharge, however, a rule of thumb following discharge would be to reduce the dose by 20–25% every one to two days as the pain decreases.⁷ Asking the patient about their analgesic plan, or creating a plan for them, can be a helpful way to turn the discussion towards treatment withdrawal. If the patient's analgesic requirements are not reducing as expected after surgery, this may be a red flag for a surgical complication and discussion with their treating physician is warranted. Alternatively, this may indicate that the patient requires further support in primary care to avoid opioid misuse.

Create an analgesia plan with the patient

The creation of an analgesic plan whenever a strong opioid is prescribed sets the expectation that treatment is a short-term intervention (see: "The principles of managing acute pain in primary care").

An analgesic plan should include:

- Medicine name, dose and dosing interval instructions for each analgesic
- Information about the adverse effects of opioids, e.g. respiratory depression and constipation, and instructions to avoid alcohol and other CNS depressants


- The likely timeframe for pain resolution and instructions on how to reduce the dose of the opioid once the pain diminishes
- Instructions to continue the weaker analgesic in the multi-modal regimen, e.g. paracetamol or a NSAID, after the opioid has been withdrawn
- Discussion about tolerance and potential for addiction
- Advice to return for a follow-up consultation if the pain is not decreasing
- Information on how to dispose of unneeded medicines

Concurrent use of paracetamol or an NSAID reduces opioid use

The concurrent use of paracetamol or a NSAID and opioids, i.e. multi-modal analgesia, is an effective strategy for reducing the dose and frequency of opioid use. For example, when NSAIDs are co-prescribed with opioids, opioid use is decreased by 25–30% and analgesia is improved.⁶ Multi-modal analgesia provides patients with reassurance that they will not be without pain relief when the opioid is withdrawn and reduces the risk of addiction as fewer opioids will need to be taken to achieve effective pain control.

Withdrawing strong opioid treatment

Strong opioids should ideally only be required for a few days when treating a patient with acute pain. An opioid can usually be withdrawn abruptly, unless used at a high dose or for a longer duration.⁸ In general, if a patient is taking the equivalent of ≥ 60 mg oral morphine per day for one week or longer, they will require a tapered withdrawal.⁸

 For further information, see: "Identifying and managing addiction to opioids", available from <https://bpac.org.nz/bpj/2014/october/opioid-addiction.aspx>

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